



Innovative Tools Advance Revolutionary Weld Technique

Marshall Space Flight Center

***Nova-Tech Engineering LLC
Lynnwood, Washington***

Originating Technology/NASA Contribution

- ◆ The friction stir welding (FSW) technique used to construct the tanks of the space shuttle launch system left a keyhole opening and had difficulty with materials of tapering thickness
- ◆ Marshall engineers developed an auto adjustable pin tool to solve these problems



Partnership

- ◆ Nova-Tech provided Marshall with stir welding machine retrofits that employed the retractable pin tool
- ◆ Nova-Tech received a co-exclusive license for the auto adjustable pin tool that is now featured on nearly all Nova-Tech stir welding systems

Product Outcome

- ◆ Product applications include rocket tank assembly and combat vehicle construction
- ◆ The first FSW system developed for the oil and gas industry was built by Nova-Tech
- ◆ Systems are being employed by research institutions exploring ways to improve the welding processes for manufacturing